

General

Title

Cervical cancer screening: age standardized incidence rate per 100,000 women of invasive cervical cancer—non-squamous cell carcinoma diagnosed in a year.

Source(s)

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Measure Domain

Primary Measure Domain

Related Population Health Measures: Population Health State

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the age standardized incidence rate per 100,000 women of invasive cervical cancer—non-squamous cell carcinoma diagnosed in a year.

Rationale

The introduction of cervical cancer screening using the Papanicolaou test (Pap test) has led to significant reductions in cervical cancer incidence and mortality in Canada. From 1977 to 2015, the incidence of invasive cervical cancer declined from 15.4 per 100,000 to an estimated 7.5 per 100,000 and invasive cervical cancer mortality declined from 4.8 per 100,000 to an estimated 1.6 per 100,000 (Canadian Cancer Society, Advisory Committee on Cancer Statistics, 2015). Despite this success, in 2015, an estimated 1,500 Canadian women will be diagnosed with invasive cervical cancer and 380 will die from the disease (Canadian Cancer Society, Advisory Committee on Cancer Statistics, 2015). Many of these women were not screened in the five years before their diagnosis, were not followed up appropriately after an

abnormal Pap test result, or the Pap test failed to detect their cancer. Additionally, women with lower levels of income, education, new immigrants, women living in rural or remote locations, and who have limited access to screening are less likely to be screened (Canadian Partnership Against Cancer, 2014). For these reasons, it is critical to continuously monitor and evaluate cervical cancer screening to ensure that Canadian women receive high-quality cancer prevention services.

Cancer incidence is the age-standardized incidence rate per 100,000 women of invasive cervical cancer diagnosed in a year (standardized to the 2011 Canadian population). Cancer incidence reflects the ultimate goal of cervical screening—a reduction in the number of women diagnosed with cervical cancer.

Evidence for Rationale

Canadian Cancer Society, Advisory Committee on Cancer Statistics. Canadian cancer statistics 2015. Toronto (ON): Canadian Cancer Society; 2015. 151 p.

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Canadian Partnership Against Cancer. Examining disparities in cancer control: a system performance special focus report. Toronto (ON): Canadian Partnership Against Cancer; 2014 Feb. 88 p.

Primary Health Components

Cervical cancer screening; invasive cervical cancer; non-squamous cell carcinoma

Denominator Description

Provincial population for each age group (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of new cases of invasive cervical cancer—non-squamous cell carcinomas (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Cervical cancer is caused by infection with the human papillomavirus (HPV) (Trottier & Franco, 2006; Dawar, Deeks, & Dobson, 2007). Of the more than 100 types of identified HPV, 40 infect the genital tract; of these, approximately 15 are considered high risk, with types 16 and 18 causally linked to 70% of cervical cancer cases. HPV is a highly prevalent sexually transmitted virus; peak prevalence occurs during adolescence and the early 20s after the commencement of sexual activity.

Most HPV infections are transient and are cleared by the immune system without signs or symptoms. However, a small percentage of women experience persistent infections. For these women, the average time between becoming infected with a high risk HPV type and developing a pre-cancerous lesion is 24 months, with a further eight to 12 years before the development of invasive cervical cancer. Because of this long latency period, screening is an effective strategy for the identification and treatment of pre-cancerous cervical lesions.

Evidence for Additional Information Supporting Need for the Measure

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Dawar M, Deeks S, Dobson S. Human papillomavirus vaccines launch a new era in cervical cancer prevention. CMAJ. 2007 Aug 28;177(5):456-61.

Trottier H, Franco EL. The epidemiology of genital human papillomavirus infection. Vaccine. 2006 Mar 30;24 Suppl 1:S1-15. [PubMed](#)

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

State/Provincial Public Health Programs

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

State/Provincial

Statement of Acceptable Minimum Sample Size

Does not apply to this measure

Target Population Age

Age greater than or equal to 20 years

Target Population Gender

Female (only)

National Framework for Public Health Quality

Public Health Aims for Quality

Health Promoting

Population-centered

Vigilant

National Strategy for Quality Improvement in Health Care

National Quality Strategy Priority

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Not within an IOM Care Need

IOM Domain

Not within an IOM Domain

Data Collection for the Measure

Case Finding Period

- January 1, 2011 to December 31, 2011
- January 1, 2012 to December 31, 2012
- January 1, 2013 to December 31, 2013 (if available)

Denominator Sampling Frame

Geographically defined

Denominator (Index) Event or Characteristic

Geographic Location

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Provincial population for each age group

Note:

This performance measure includes all women 20 years of age and older.
Age-standardized incidence rates should be calculated using the age distribution of the 2011 Canadian population.
Use Statistics Canada population data for consistency across the provinces and territories.
Define population using Statistics Canada population estimates at the mid-year.

Exclusions

Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of new cases of invasive cervical cancer—non-squamous cell carcinoma only

Note:

Invasive cervical cancers, i.e., all cases with an International Classification of Diseases for Oncology (ICD-O) C53 topography code.
Separate squamous cell carcinoma from all other morphology types (adenocarcinoma, mixed, unclassified, unknown).
For squamous cell carcinomas, include all invasive histology codes that are within the histology range of squamous cell neoplasms (8050 to 8084). Because some of these histologies are unlikely to occur in the cervix, ICD-O topography code of C53 must also be specified. Refer to the original measure documentation for the entire squamous cell neoplasia list.
Define age as the woman's age at diagnosis (pathology/biopsy).
Refer to the original measure documentation for the entire squamous cell neoplasia list.

Exclusions

Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

State/Province public health data

Type of Health State

Clinically Diagnosed Condition

Instruments Used and/or Associated with the Measure

Cervical Cancer Screening Pathway with Quality Indicators

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Does not apply to this measure (i.e., there is no pre-defined preference for the measure score)

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

Age-standardized incidence rates should be calculated using the age distribution of the 2011 Canadian population.

Age Groups: 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80+

Data should be submitted so that incidence can be calculated for ages 30 to 69.

Standard of Comparison

not defined yet

Prescriptive Standard

5.5 cases per 100,000 by 2037 (based on 80% screening participation and 70% immunization)

Evidence for Prescriptive Standard

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Identifying Information

Original Title

10b. Cancer incidence.

Measure Collection Name

Cervical Cancer Screening Indicators

Submitter

Canadian Partnership Against Cancer - National Government Agency [Non-U.S.]

Developer

Canadian Partnership Against Cancer - National Government Agency [Non-U.S.]

Public Health Agency of Canada - National Government Agency [Non-U.S.]

Funding Source(s)

A financial contribution from Health Canada, through the Canadian Partnership Against Cancer

Composition of the Group that Developed the Measure

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Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2016 May

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in February 2017.

Measure Availability

Source available from the [Canadian Partnership Against Cancer Web site](#) .

For more information, contact the Canadian Partnership Against Cancer at 1 University Ave, Suite 300, Toronto, ON, Canada M5J 2P1; Phone: 1-877-360-1665; E-mail: info@cancerview.ca; Web site: www.cancerview.ca .

Companion Documents

The following is available:

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: setting targets for program performance. Toronto (ON): Canadian Partnership Against Cancer; 2013 Nov 13. 27 p. This document is available from the [Canadian Partnership Against Cancer Web site](#)

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NQMC Status

This NQMC summary was completed by ECRI Institute on August 22, 2016. The information was verified by the measure developer on September 27, 2016.

The information was reaffirmed by the measure developer on February 1, 2017.

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Production

Source(s)

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

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